

19, clarify that the concentration is that of the detergent. Claims 29 and 38 recite specific types of colloidal particles, support for which is found in the present specification on page seven, in the first full paragraph. Claims 30 and 39 recite specific types of biomolecules, support for which is found in the present specification on page seven in the third full paragraph. New claim 31, is an independent claim that recites "contacting colloidal particles" with a biomolecule containing solution. Claims 32 and 33, respectively, recite specific colloidal particles and biomolecules. No new matter has been added. Applicant respectfully submits that the rejection as it might be applied to the new claims has been overcome, and respectfully requests allowance of all claims 24-39.

Claim 17 was rejected under § 102(e) as anticipated by Liberti et al. Applicant addresses this rejection as it might be applied to new claims 24 and 34.

Liberti attempts to solve the problems associated with the colloidal instability of magnetite crystals. Specifically, magnetite crystals tend to agglomerate, yielding larger particles having diameters in the micrometer (mM) range. To obtain magnetite particles under 200 nM, Liberti teaches disruption of the agglomerates by various means. These means include radiation, vibration, pH modification and sonication. Please see Liberti's claim 7. Once separated, Liberti's particles are stabilized to prevent re-agglomeration. This involves coating the separated particles with, for example, proteins, PEG and detergent.

One aspect of the presently claimed invention is that the gold nanoparticles are micro-disbursed from the beginning. At no point is there an agglomeration of the particles. Hence, no coating is required for stabilization. Furthermore, the detergent is not required for colloidal stabilization, but improves orientation of the antibodies on the gold surface. It is of no importance whether the detergent is added to the particles, the antibody solution or to a mixture of both. The concentration of the detergent is not critical. Of paramount importance is that it is simply added. Further, inert protein and/or PEG is not added until after the coating of the antibodies. This allows saturation of the remaining free patches on the particle surface and thus increases long term stability.

Since Liberti fails to teach all the aspects of the presently claimed invention, it is an improper basis for rejection under § 102. Therefore, Applicant respectfully requests that

this rejection be withdrawn and claims 24 and 34 allowed.

Claims 18-21 were rejected under § 103 (a) as being unpatentable over Liberti et al. Applicant addresses this rejection as it might be applied to new claims 25-28 and 35-37, analogues of originally filed claims 18-21.

The Office Action concedes that Liberti fails to teach the importance of adding and monitoring detergents in the solution. Further, the Office Action concedes that Liberti fails to teach an additional stabilizer, such as an inert protein and/or polyethylene glycol. Finally, the Office Action asserts that the optimal concentration of detergent might be determined by routine experimentation. However, Liberti adds detergent for a completely different reason than that of the presently claimed invention. Since Liberti seeks to solve a different problem, it is unclear how Liberti might suggest an optimal detergent concentration for Applicant's presently claimed invention.

One aspect of the presently claimed invention is the use of the detergent to better orient the antibodies on the gold surface. In the presently claimed invention, in contrast to Liberti, the detergent is not for dispersion stabilization.

Since Liberti and the presently claimed invention face different problems, it is unclear how Liberti might suggest a solution to the problem addressed by Applicant's presently claimed invention. Therefore, Applicant submits that Liberti is an improper basis for rejection under § 103, and respectfully requests that this rejection be withdrawn and claims 25-28 and 35-37 be allowed.

Applicant submits that claims 24-39 are now in condition for allowance.

Should the Examiner deem that any further action by the Applicants would be desirable for placing this application in even better condition for issue, the Examiner is requested to telephone Applicant's undersigned representative at the number listed below.

In the event this paper is not timely filed, applicants hereby petition for an appropriate extension of time. The fee for this extension may be charged to our Deposit Account No. 01-2300, along with any other additional fees that may be required with respect to this paper.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Laurence J. Edson", written over a horizontal line.

Laurence J. Edson  
Registration No. 44,666  
Attorney for Applicants

ARENT FOX KINTNER PLOTKIN & KAHN  
1050 Connecticut Avenue, NW, Suite 400  
Washington, D.C. 20036-5339  
Tel. (202) 857-6000  
Fax (202) 638-4808